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United States Department of Agriculture,

BUREAU OF ANIMAL INDUSTRY.

A. D. MELVIN, CHIEF OF BUREAU.

SERVICE AND REGULATORY ANNOUNCEMENTS.

JUNE, 1917.

[This publication is issued monthly for the dissemination of information, instructions, rulings, etc., concerning the work of the Bureau of Animal Industry. Free distribution is limited to persons in the service of the bureau, establishments at which the Federal meat inspection is conducted, public officers whose duties make it desirable for them to have such information, and journals especially concerned. Others desiring copies may obtain them from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 5 cents each, or 50 cents a year. A supply will be sent to each official in charge of a station or branch of the bureau service, who should promptly distribute copies to members of his force. A file should be kept at each station for reference.]

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CHANGES IN DIRECTORY.

Meat Inspection Inaugurated.

75. Indian Packing Co., Green Bay, Wis.
*986. Elmore Live Stock Co., rear Clarke's distillery (mail P. O. box 43), Peoria, Ill.
101. Crown Margarin Co., 3301 Park Avenue, St. Louis, Mo.
107. Paul Jourdain (Inc.), P. O. Box 652, Dunellen, N. J.
*102. Kansas Packing Co., Fourth Avenue East, Hutchinson, Kans.

Meat Inspection Discontinued.

79. Richard Webber and Harlem Packing House, subsidiary, New York, N. Y.
*963. The Termier Packing Co., Twenty-fourth and Delaware Streets, Kansas City, Kans.
*69. Roesch Packing Co., Philadelphia, Pa.

Meat Inspection Temporarily Suspended.

765. John Groce & Sons, Circleville, Ohio.
44. E. J. Vaudreuil Packing Co., Eau Claire, Wis.
844. Cincinnati Delicatessen Supply Co., Cincinnati, Ohio.
*597. C. Stoppenbach's Sons, Jefferson, Wis.
12–C. Kingan & Co. (Ltd.), Richmond, Va.
58. Quin Wo Co., Jersey City, N. J.
229. V. W. Joyner, Smithfield, Va.
221. P. D. Gwaltney, jr. & Co., Smithfield, Va.
*158. Morristown Packing Co., Morristown, Tenn.
*149. S. M. Holtsinger & Co., Morristown, Tenn.

Changes in Names of Establishments.

*680. Armour & Co., and following subsidiaries: Armour & Co. (Ltd.), Armour Canning Co., Armour Packing Co., Anglo-American Provision Co., Central Lard Co., Colorado Packing & Provision Co., Friedman Manufacturing Co., Fowler Packing Co., German-American Provision Co. of Chicago, Hammond Packing Co., Halsted & Co., New York Butchers Dressed Meat Co., North American Provision Co., E. H. Stanton Co., Passaic Beef Co., Prairie State Canning Co., Wabash Packing Co.; James Wright & Co., Virginia and E Streets, Spokane, Wash., instead of E. H. Stanton Co.
857. Downey, Farrell Co., and James T. Downey Co., subsidiary, 509–519 North Union Avenue, Chicago, Ill., instead of James T. Downey Co.
*153. Swift & Co., 615 South Chambers Street, Sioux City, Iowa, instead of R. Hurni Packing Co.

Stations Discontinued.

Beatrice, Nebr.
McAlester, Okla.
Jefferson, Wis.
Smithfield, Va.
Mitchell, S. Dak.

Stations Added.

San Angelo, Tex., scabies eradication; interstate inspection of cattle and horses, Dr. I. B. Paxton, 606–607 Central National Bank Building.

Green Bay, Wis., meat inspection, Mr. Frank J. Dixon, care Indian Packing Co.

Fort Worth, Tex., tick eradication, public stock yards; transportation of southern cattle, Dr. Harry Grafke, room 217 Exchange Building, Stock Yards Station.

Dunellen, N. J., meat inspection (substation of Newark, N. J.).

Hutchinson, Kans., meat inspection, Dr. O. A. Stingley, care Kansas Packing Co.

Springfield, Mass., tuberculosis eradication, Dr. W. G. Benner, care Springfield Provision Co., Brightwood.

Indianapolis, Ind., tuberculosis eradication, Dr. H. E. Smith, 315 Federal Building.

South St. Paul, Minn., tuberculosis eradication, Dr. R. H. Treacy, 408 Live Stock Exchange Building.

Richmond, Va., tuberculosis eradication, Dr. R. E. Brookbank, room 418 Lyric Building.

Changes of Officials in Charge.

Bismarck, N. Dak., Dr. H. H. Cohenour, 349 Federal Building, instead of Dr. R. H. Treacy.

Little Rock, Ark., Dr. V. W. Knowles, Old State House, instead of Dr. J. E. Gibson.

Winona, Minn., Dr. C. L. Elliott, care Interstate Packing Co., instead of Dr. W. J. Fretz.

Changes in Addresses of Officials in Charge.

Dr. C. F. Payne, 303 Live Stock Exchange Building, Denver Colo., instead of 311 Live Stock Exchange Building.

Dr. H. K. Walter, 638 Munsey Building, Washington, D. C., instead of 929–930 Munsey Building.

Dr. Leslie J. Allen, Western Union Building, McAlester, Okla., instead of room 217, Exchange Building, Stock Yards Station, Fort Worth Tex.,

Dr. Jens Madsen, 750 Central Building, Seattle, Wash., instead of 646 Central Building.

Dr. S. E. Cosford, University Farm, Lincoln, Nebr., instead of Beatrice, Nebr.

Dr. J. B. Cady, University of California, Berkeley, Cal., instead of El Centro, Cal.

Note.

The name of the subsidiary of establishment 829, The Pure Food Factory "Hansa," New York, N. Y., changed from E. S. Burnham Packing Co. to E. S. Burnham Co.

Remove Dr. J. V. DeLaney, 1843 Iglehart Street, St. Paul, Minn. (Dr. DeLaney will be transferred to tuberculosis eradication.)

NOTICES REGARDING MEAT INSPECTION.

SKINS MUST BE REMOVED FROM CARCASSES OF CALVES FROM AREA QUARANTINED FOR TEXAS FEVER.

In order to prevent the spread of Texas fever infection through the forwarding of calf carcasses with the skins attached, it is hereby ordered that no carcass of a calf from the area quarantined on account of Texas or splenetic fever and which is slaughtered in an establishment where Federal meat inspection is maintained shall be taken from the establishment until the skin is removed from the carcass.

CONSERVATION OF MEAT AND FATS.

With a view to effecting during the present emergency such changes in procedure consistent with approved meat-inspection methods as will save for human food meat and products which are now used for other purposes, the following instructions are issued:

Referring to instructions in Service and Regulatory Announcements for August, 1914, in regard to the disposal of certain organs and parts of carcasses affected with tuberculosis, inspectors are advised that where only slight lesions exist in the lymph glands of the mesenteric chain the mesenteric fat may be passed for sterilization, provided the carcass is one passed for food without restrictions and that the affected glands are first removed and condemned.

Attention is directed to the fact that light-colored livers are occasionally present in dairy cows and in pregnant animals in which no disease processes are evident. There may be no pathological disturbances causing the alteration in color, although yellowish discoloration of the liver may be one of the symptoms of hepatogenous icterus. Livers bearing scars may present no alteration other than an excessive amount of connective tissue which remains at the seat of some recovered lesion. Inspectors will therefore carefully avoid condemnation of pale livers that are unassociated with icterus and those which bear healed scars and are wholesome.

The trimming of carcasses, parts, and organs more than is necessary should also be avoided.

In trimming the necks of hog carcasses as prescribed in regulation 11, section 3, paragraph 2, rule B (*d*), the jowls and neck fats should be left on the carcass and disposed of with, or the same as, the carcass.

The disposal of the heart and weasand meat which are free from disease should be the same as that specified for the carcass to which they belong.

The abomasum is regarded as edible, and when this organ or any part thereof is properly cleaned it should be passed for food under the same conditions which apply to other edible parts.

Beef gall bladders with accompanying fat, which have been slashed, emptied, and thoroughly cleaned, may be passed for food under the same conditions as apply to other edible parts.

Fats with attached tissues, generally designated as sinkers in cold-water vats, may be passed for food under the same conditions as those prescribed for other fats.

SPECIAL BRANDING OF CARCASSES.

Referring to instructions in Service and Regulatory Announcements of August, 1916, page 70, under the caption "Special Branding of Carcasses," hereafter carcasses and parts from which portions of the pleura or peritoneum have been removed on account of adhesions or other harmless condition need not be marked with a serial number identifying the veterinary inspector under whose supervision such tissues were removed. However, such stripped surfaces are required to be marked with the regular bureau brand.

APPROVAL OF STENCILS, DIES, TAGS, ETC.

In future inspectors in charge of meat inspection will not submit to the bureau for approval imprints of stencils, dies, or rubber stamps covering only the insignia of the United States Quartermaster Corps or the crescent affixed to shipping containers in accordance with the provisions outlined in the specifications for subsistence supplies for the United States Army.

Imprints covering the name of the product, month and year of delivery, and other essential features should be approved by the Washington office in advance of application, but the approval granted should be considered as being in blanket form so far as concerns the figures denoting the month and year of delivery.

It will not be required to submit for approval imprints of stencils or dies bearing only shipping marks, as, for example, one or more letters in a diamond or between two parallel bars, unless such marks are accompanied by names, addresses, or other wording or statements.

Lot tags bearing only the lot number or date, and which are applied to carcasses merely for the purpose of identification, grading, or assembling in coolers need not be submitted for approval.

In cases where there is any doubt as to the application of the foregoing rulings, imprints or tags should be submitted to the bureau, accompanied by a request for a decision. If approval is required the return of the imprints or dies bearing the stamp of approval should be considered as self-explanatory.

M. I. FORM 101.

In entering on the semimonthly M. I. Form 101 the character of work done by the various employees sufficient data should be given to show clearly the kinds of work done by each individual employee on the date for which the report is rendered, as shown on the M. I. Form 102 time slip for that day. It is not sufficient to state on the M. I. 101 form "Meat inspection," "Miscellaneous," "All departments," "Special detail," etc., but the particular department supervised on work done by the employee should be specifically shown, as "D. S. cellars," "P. M. cattle," "Rough offal," "Sausage department," etc., and for establishments where one employee covers all departments, show the particular kinds of work supervised on that day, such as "Smokehouse," "Beef slicing," etc. Any special work outside of the establishment routine, such as "Tuberculin testing," "28-hour law," "Cleaning cars," etc., should be carefully stated.

ANIMALS SLAUGHTERED UNDER FEDERAL INSPECTION, MAY, 1917.

Station.	Cattle.	Calves.	Sheep.	Goats.	Swine.
Chicago	186,989	77,884	185,479	1,962	558,572
Fort Worth	79,700	25,994	20,528	6,833	69,711
Kansas City	99,723	16,366	72,265	8,644	217,386
National Stock Yards	46,834	10,509	21,486	1,676	153,956
Omaha	82,059	6,204	89,984	657	197,799
Sioux City	21,816	2,068	6,356	1	108,928
South St. Joseph	32,320	2,275	23,585	288	170,139
All other establishments	265,628	203,298	212,778	3,049	1,607,017
Total: May, 1917	815,069	344,598	632,451	23,110	3,083,518
May, 1916	564,207	267,422	854,014	44,028	3,274,941
11 months ending May, 1917	8,464,318	2,403,145	10,633,387	163,496	64,526,004
11 months ending May, 1916	6,756,079	1,819,542	10,996,102	167,833	37,320,230

IMPORTS OF FOOD ANIMALS AND OF MEATS AND MEAT FOOD PRODUCTS.

The statements following show the imports of food animals and of meats and meat food products inspected by the Bureau of Animal Industry during May, 1917, with figures for other periods for comparison:

Imports of food animals.

Country of export.	Cattle.	Swine.	Sheep.	Goats.
Mexico	16,416	5	46	225
Canada	10,329	155	169	1
Great Britain	280	.....	5	.....
Total: May, 1917	27,025	160	220	226
May, 1916	23,444	148	5,386	301
11 months ending May, 1917	340,613	2,849	154,380	20,142
11 months ending May, 1916	433,985	4,668	207,397	77,253

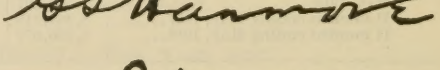
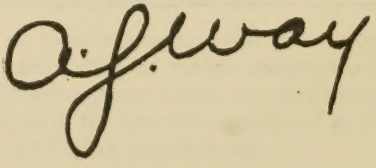
Imports of meats and meat food products.

Country of export.	Fresh and refrigerated.		Canned and cured.	Other products.	Total weight.
	Beef.	Other.			
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
Argentina	.....	786,036	413,046	154,551	1,353,633
Canada	114,744	576,929	35,797	13,493	740,963
Uruguay	.....	17,051	6,550	.....	23,601
Other countries	.....	.....	14,952	2,073	17,025
Total: May, 1917	114,744	1,380,016	470,345	170,117	2,135,222
May, 1916	1,499,943	289,377	56,560	28,553	1,874,433
11 months ending May, 1917	14,827,880	4,828,975	3,076,111	1,037,906	23,770,872
11 months ending May, 1916	81,073,897	23,235,963	2,481,682	1,543,657	108,335,199

Condemned in May, 1917: Beef, 442 pounds; pork, 43 pounds; total, 485 pounds.

FOREIGN OFFICIALS AUTHORIZED TO SIGN INSPECTION CERTIFICATES FOR MEAT AND PRODUCTS FOR IMPORTATION INTO THE UNITED STATES.

The following are additional names, addresses, and facsimile signatures of foreign National Government officials authorized to sign and issue certificates of inspection for meat and meat food products offered for importation into the United States:

Country, name, and address.	Signature.
Canada. G. S. Hanmore, 1127 Keele Street, Toronto.	
A. J. Way, 1127 Keele Street, Toronto.	

INSPECTION AND TESTING OF ANIMALS FOR CANADA.

The following change has been made in the list of practicing veterinarians registered by the bureau and authorized to inspect and test with mallein horses, mules, and asses intended for export to Canada:

Change in Address.

Dr. W. R. O'Neal, Pomona, Cal., instead of Newman, Cal.

SODIUM CARBONATE FOR ARSENICAL DIPS.

There are on the market other forms of sodium carbonate besides those specified in Farmers' Bulletin 603, some of which may be equally appropriate and more economical than the specified forms for the preparation of arsenical dipping baths. In view of the lack of definite knowledge regarding the general reliability of these various products as commercially obtainable, it is not possible for the bureau to publish formulas admitting their general use, although certain brands may be satisfactory. Accordingly, for the present, propositions for the use of other forms of sodium carbonate will be handled through the local offices. If such a proposition is made to the inspector in charge he should obtain a guaranteed sample of at least one-half pound of the product, together with the name and brand and the name of the maufacturer. The guaranty should state the strength at which the product is maintained, in terms of sodium carbonate or any other convenient unit. The sample and the information obtained is to be forwarded to the Biochemic Division of the bureau for consideration and report.

LICENSES FOR VETERINARY BIOLOGICAL PRODUCTS.

The following additions and alterations have been made in the list of licenses for the manufacture of veterinary biological products for the year 1917, under the act of Congress of March 4, 1913 (37 Stat., 832), and the regulations made thereunder (B. A. I. Order 196):

Products Added.

License No. 5, Parke, Davis & Co., Detroit, Mich., issued January 22, 1917. The following product was added June 18, 1917: Antianthrax serum.

License No. 107, Jensen-Salsbery Laboratories, Inc., Kansas City, Kans., issued December 22, 1916. The following product was added June 25, 1917: Liquid blackleg vaccine.

License Canceled.

License No. 51, Union Serum Co., Sioux City, Iowa, issued December 22, 1916, covering hog-cholera virus and anti-hog-cholera serum, canceled June 18, 1917.

REQUIREMENTS CONCERNING HOG-CHOLERA VIRUS AND ANTI-HOG-CHOLERA SERUM.

The following requirements now in effect concerning the preparation and testing of hog-cholera virus and anti-hog-cholera serum have been promulgated from time to time and are here published for convenient reference and for the information of those concerned:

ADMISSION OF ANIMALS.

Each lot or shipment of animals offered for admission to establishments licensed to prepare hog-cholera virus and anti-hog-cholera serum shall be accompanied with a properly executed certificate, according to the following form, which shall be signed by the serum company:

_____, 191__.

This is to certify that_____{hogs / calves}which are offered for admission to the establishment of the_____Co., are from the farm of_____, located in the State of _____, county of_____, township of_____, and to the best of our knowledge and belief were on said farm at least 21 days prior to this date, and were not exposed to any infectious, contagious, or communicable disease, and no new stock was brought on to the said farm during that time. The said animals have not been in or transported through any public stock yards, abattoir pens, or similar places, nor have they been exposed to any infectious, contagious, or communicable disease since their removal from said farm.

INSPECTION AND IDENTIFICATION OF ANIMALS.

The following requirements are made concerning all animals brought on the premises of licensed establishments which are intended for use in the preparation or testing of hog-cholera virus or anti-hog-cholera serum:

The establishment shall provide a suitable place, to be designated as "receiving pens" for the inspection of animals and through which all animals used by the establishment shall gain entrance to the premises. The animals shall be examined by a veterinary inspector as soon as practicable after they are received in order to determine their physical condition.

If after examination the animals are permitted to remain upon the premises and to gain entrance to the "holding pens" of the establishment, they shall be given a serially numbered metal tag either prior to or at the time of inoculation or hyperimmunization.

Each tag shall be securely attached to the ear of the animal in a manner that will preclude the removal thereof by any practicable means without mutilating the tag or the ear to which it is attached. The tag so attached shall serve as an identification mark of the animal so long as the animal remains on the premises.

All tags which are used shall be furnished and attached by the establishment, and when not in actual use they shall at all times be held in the custody of a bureau employee.

In addition to receiving a tag number, all animals which are used in testing the potency of anti-hog-cholera serum are required to be marked at the time the test is begun in the following manner: A circular hole, approximately the size of a 5-cent piece, shall be pierced in the center of the left ear of all animals used in each test.

No pigs showing marks of the above-described character are to be used in testing the potency of anti-hog-cholera serum at licensed establishments. Furthermore, no pigs with the left ear removed or mutilated, so as to prevent the detection of this identifying mark, shall be used in a serum test.

HYPERIMMUNE HOGS REQUIRED TO ASSOCIATE WITH CONTROL ANIMALS.

Licensed establishments which for any reason are about to suspend operations, or are conducting their establishments in such a way that the hyperimmune hogs are not being subjected to proper contact with other animals which may be observed for evidence of foot-and-mouth disease after the destruction of the hyperimmunes, are required to comply with the following:

1. Hyperimmune hogs shall be required to associate with control animals for a period of at least 10 days prior to subjecting them to the carotid or final bleeding process. The "control animals" shall be held on the premises under the observation of a bureau employee for at least two weeks after the hyperimmune hogs have been destroyed. In the event hogs are used as control animals their number should equal the number of hyperimmune hogs with which they are required to associate. Should calves be used as control animals, and the number of hyperimmune hogs exceed 100, at least four calves should be required, otherwise two calves will be sufficient.

2. All hyperimmune hogs which are subjected only to the tail-bleeding process should be held under the observation of a bureau employee for at least two weeks after the last tail bleeding is collected.

REQUIREMENTS CONCERNING HOG-CHOLERA VIRUS INTENDED FOR HYPERIMMUNIZATION.

Principle: It has been demonstrated that anti-hog-cholera serum of satisfactory potency is produced when hogs immune to hog cholera for a sufficient period of time are properly hyperimmunized with sufficient doses of highly virulent hog-cholera virus. It has also been demonstrated that pigs sufficiently susceptible to the disease hog cholera which are properly inoculated with virulent hog-cholera virus and which show certain ante-mortem symptoms and post-mortem lesions produce a virus of satisfactory virulence.

In view of the foregoing, and in order that hog-cholera virus intended for hyperimmunization may not be worthless or unduly lacking in virulence, the following rules are promulgated:

1. Pigs which are intended for use in the preparation of hog-cholera virus shall be healthy when admitted to the premises of licensed establishments. The temperatures of these pigs shall be appropriately ascertained and recorded by the establishment under the supervision of a bureau employee, when in the opinion of the inspector in charge this is necessary to determine the health of the animals. If any condition is exhibited by the pigs which makes it impracticable or impossible to determine whether or not the animals are healthy when presented for admission they should be held in the receiving pens of the establishment for further observation.

2. For use in the production of virus for hyperimmunization, licensed establishments shall properly inoculate young pigs weighing not more than 145 pounds each with at least 2 cubic centimeters of a virulent strain of hog-cholera virus.

3. Pigs which are to be used in the production of hog-cholera virus shall be subjected to a careful examination by a veterinary inspector immediately prior to inoculation.

4. The temperature of all pigs used to produce hog-cholera virus shall be properly ascertained and recorded by licensed establishments each day subsequent to the fifth day after inoculation, and at such other times as the inspector in charge deems necessary. The temperature of each pig shall invariably be taken and recorded on each day the animal is found to be visibly sick.

These temperatures should be taken under the supervision of a bureau employee when possible.

5. Hog-cholera virus derived from pigs which become visibly sick within three days from the time they are admitted to the premises of licensed establishments shall not be used for hyperimmunization.

6. Hog-cholera virus derived from pigs which were not visibly sick with hog cholera shall not be used for hyperimmunization.

7. A post-mortem examination of all pigs from which hog-cholera virus is derived should be supervised by a veterinary inspector.

8. Hog-cholera virus derived from pigs which upon post-mortem examination do not show lesions of acute hog cholera shall not be used for hyperimmunization. A diagnosis of hog cholera should not be made unless lesions of the disease are found in two or more organs or tissues.

9. Hog-cholera virus derived from pigs which upon ante-mortem or post-mortem examination are found to be so affected with any condition or infectious, contagious, or communicable disease as to render the virus contaminated shall be destroyed by the establishment under the supervision of a bureau employee. Virus derived from pigs which are found to be affected with tuberculosis need not be destroyed provided the lesions are slight or localized, and are calcified or encapsulated.

REQUIREMENTS CONCERNING HOG-CHOLERA VIRUS INTENDED FOR SIMULTANEOUS INOCULATION.

1. For use in the production of hog-cholera virus the establishment shall inoculate young pigs weighing not less than 40 pounds nor more than 100 pounds each with at least 2 cubic centimeters of a virulent strain of hog-cholera virus. The inoculations shall be made under the supervision of a bureau employee.

2. Pigs which are used to produce hog-cholera virus shall be healthy at the time of inoculation. The temperature of each animal shall be appropriately ascertained and permanently recorded by the establishment under the supervision of a bureau employee, if in the opinion of the inspector in charge this is necessary to determine the health of the animal. Each pig should be subjected to a careful examination by a veterinary inspector prior to inoculation.

3. The temperature of all pigs used to produce hog-cholera virus shall be properly obtained and recorded by licensed establishments each day subsequent to inoculation. These temperatures should be taken under the supervision of a bureau employee when possible.

4. Hog-cholera virus shall not be collected from pigs which become visibly sick on or before the fourth day or subsequent to the seventh day after the time of inoculation.

5. Hog-cholera virus shall be collected only from pigs which become visibly sick of hog cholera within 7 days and visibly sick to a degree sufficient to result in death within 15 days after the time of inoculation.

6. Pigs which have been inoculated for the production of hog-cholera virus shall be killed only after permission has been obtained from an authorized bureau employee.

7. Hog-cholera virus shall be defibrinated promptly after collection and immediately thereafter chilled and maintained at a temperature not to exceed 60° F.

8. Pigs from which hog-cholera virus is derived shall be subjected to a post-mortem examination by a veterinary inspector.

9. Hog-cholera virus shall be derived only from pigs which upon post-mortem examination show lesions of acute hog cholera and which are not so affected with any condition or infectious, contagious, or communicable disease as to

render the virus contaminated. A diagnosis of hog cholera shall not be made unless lesions of the disease are found in two or more organs or tissues.

10. Hog-cholera virus derived from pigs which upon ante-mortem or post-mortem examination are found to be so affected with any condition or infectious, contagious, or communicable disease as to render the virus contaminated shall be destroyed by the establishment under the supervision of a bureau employee.

11. Hog-cholera virus derived from pigs which are found to be affected with tuberculosis may be used for simultaneous inoculation, provided the lesions are slight, or are calcified or encapsulated, and provided further that the virus is heated as hereinafter described.

12. The heating of hog-cholera virus shall be conducted under the supervision of a bureau employee and in such manner that the product and the entire container thereof will be subjected to a temperature ranging from 50° to 50.5° C. for 12 hours.

13. Hog-cholera virus which has been heated as hereinbefore described shall not be handled thereafter in a manner which will expose the product to contamination.

14. When hog-cholera virus is heated as described in paragraph 12 of this order and tested upon pigs as hereinafter provided, the product need not be tested upon calves.

15. Each batch of hog-cholera virus intended for simultaneous inoculation shall contain one-half of 1 per cent of phenol by volume and be thoroughly mixed. Phenolization must be accomplished with accuracy and in a manner which will prevent undesirable changes in the product.

16. All records should clearly indicate the particular hog or group of hogs from which each batch of virus is derived. The quantity prepared for phenolization and the total quantity after phenolization should be properly indicated.

17. When hog-cholera virus is heated each batch should be tested for virulence by inoculating intramuscularly with 2 cubic centimeters of virus each of two pigs which are susceptible to hog cholera. Should the pigs thus inoculated show visible sickness as required for pigs inoculated to furnish virus for simultaneous inoculation, the virus under test may be released for marketing.

18. The pigs selected for testing the virulence of heated virus should be inoculated immediately after being admitted to the premises. The quarters where the pigs are held during the test should be isolated as completely as feasible from quarters occupied by other pigs sick of hog cholera. All reasonable precautions should be taken to prevent infection of these pigs from sources other than by inoculation. Such precautions should at least include a thorough cleaning and disinfection of the pen in which the pigs are held during the test and a disinfection of the pigs after they are placed in the holding pen. The disinfection of these pens and test pigs shall be accomplished as provided in sections 5 and 6 of regulation 1 and section 2 of regulation 6 of B. A. I., Order 245.

MIXING VIRUS AND COLLECTING TEST SAMPLES.

Hog-cholera virus intended for purposes other than hyperimunization shall be collected in batches of not to exceed 10,000 c. c. each. Each batch shall be thoroughly mixed within 24 hours after collection.

Before the addition of carbolic acid, but after mixing, a representative sample of each batch shall be taken by a bureau employee for use in testing the virus to determine its freedom from the infection of foot-and-mouth disease.

A representative sample, consisting of 100 c. c., collected in three containers, which is to be known as the "virus stock sample," shall be taken from each batch of hog-cholera virus after phenolization, and marked by a bureau employee. If the virus is released, at least one of the containers should be retained unopened under bureau lock for at least three months after the expiration of the latest return date shown upon the trade labels affixed to the immediate or true containers of the virus corresponding to the stock sample.

When phenolized virus is used for inoculating pigs used in testing the purity and potency of anti-hog-cholera serum, fresh stock samples should be used when feasible.

ANIMALS USED IN TESTING HOG-CHOLERA VIRUS.

For use in testing batches of hog-cholera virus intended for simultaneous inoculation, licensed establishments shall furnish two calves not less than 2 months old. Each calf shall receive an intravenous injection of at least 2 c. c. of the virus under test before the addition of phenol.

The calves which are used in testing the purity of hog-cholera virus shall be inoculated within 24 hours after the batch of virus to be tested has been collected, and be held under the observation of a bureau employee for a period of at least 10 days. Should foot-and-mouth disease appear within the United States these test animals shall be held for 15 days or longer when in the judgment of the inspector in charge this is necessary to determine whether or not the virus is contaminated, dangerous, or harmful.

RETURN DATE ON CONTAINERS OF HOG-CHOLERA VIRUS.

The return date placed upon the immediate or true containers of hog-cholera virus prepared for simultaneous inoculation shall be a date within 60 days after the day on which the product is collected.

PREPARATION OF ANTI-HOG-CHOLERA SERUM.

1. Hogs which are used to produce anti-hog-cholera serum should be immune to hog cholera for at least 60 days prior to hyperimmunization.

2. Hogs which are used to produce anto-hog-cholera serum shall be healthy at the time of hyperimmunization and shall receive an intravenous injection of at least 5 c. c. of hog-cholera virus for each pound of weight. The temperature and weight of each animal should be properly obtained and recorded by the establishment prior to hyperimmunization. These temperatures and weights should be taken under the supervision of a bureau employee, if in the judgment of the inspector in charge such action is necessary for satisfactory results. Each hog should be subjected to a careful examination by a veterinary inspector prior to hyperimmunization.

3. The temperatures of all hogs used to produce anti-hog-cholera serum shall be ascertained and recorded by licensed establishments on the day of bleeding and at such other times as the inspector in charge deems necessary. These temperatures shall be taken under the supervision of a bureau employee. All temperatures shall be taken under normal conditions so far as possible, and in a manner which will expedite the work.

4. All hogs which are used to produce anti-hog-cholera serum shall be subjected to a careful examination by a veterinary inspector immediately prior to each bleeding. Only those hogs shall be bled for serum which are found to have a temperature of less than 104° F. and are free from infectious, contagious, or communicable diseases or other harmful conditions.

5. All hogs from which anti-hog-cholera serum is derived shall be subjected to a post-mortem examination by a competent veterinarian, except as hereinafter provided, and if it is found as a result of such examination that any hog is so affected with any condition or infectious, contagious, or communicable disease so as to render the serum worthless, contaminated, dangerous, or harmful, the serum collected from such hogs shall be destroyed by the establishment under the supervision of a bureau employee. Serum derived from hogs which are found to be affected with tuberculosis need not be destroyed, provided the lesions are slight, and calcified or encapsulated.

6. Anti-hog-cholera serum derived from each hyperimmune hog shall be kept separate and apart from other serum except as hereinafter provided, and until it has been determined by post-mortem examination that the hog from which the serum was derived was not so affected with any condition or infectious, contagious, or communicable disease as to render the serum worthless, contaminated, dangerous, or harmful.

7. When anti-hog-cholera serum is heated as hereinafter described the serum derived from each hyperimmune hog may be appropriately mixed with serum from other hyperimmune hogs immediately after collection, provided the final batch or mixture is prepared as hereinafter provided.

2. The heating of anti-hog-cholera serum shall be conducted under the supervision of a bureau employee and in such a manner that the product and the entire container thereof will be subjected to a temperature ranging from 59 to 60° C. for 30 minutes.

9. Anti-hog-cholera serum which has been heated as hereinbefore described shall not be handled thereafter in a manner which will expose the product to contamination.

10. Final mixtures or batches of anti-hog-cholera serum shall contain relative proportions of the several bleedings. Single bleedings from each hog shall not be divided or become a part of two or more batches unless the serum is subjected to heat as hereinbefore described.

11. Anti-hog-cholera serum which is to constitute a batch or portion thereof may be strained into a single container, after which the quantity should be accurately determined.

12. The phenolization of anti-hog-cholera serum must be accomplished with accuracy and in a manner which will prevent the occurrence of undesirable changes in the product.

13. All records should clearly indicate the particular hog or group of hogs from which each batch of serum or portion thereof is derived. The quantity prepared for phenolization and the total quantity after phenolization should be properly indicated.

MIXING SERUM AND COLLECTING TEST SAMPLES.

All anti-hog-cholera serum which has been prepared for testing shall contain one-half of 1 per cent of phenol and be collected in batches of not more than 100,000 c. c. each, and shall be thoroughly mixed in a single container. After mixing, representative samples consisting of three bottles containing at least 250 c. c. each, to be known as the "serum test samples," shall be collected and marked with identifying marks by a bureau employee.

If the serum is released one of the three test samples of serum shall be held under bureau lock for at least six months after the latest return date shown on the trade labels affixed to the immediate or true containers of the serum corresponding to the test samples.

HOG-CHOLERA VIRUS AND ANTI-HOG-CHOLERA SERUM HELD UNDER BUREAU LOCK.

Each batch of hog-cholera virus and anti-hog-cholera serum which is held for treatment or testing, including the test samples, shall be placed in a suitable room, compartment, or receptacle, as required by amendment 1 to regulation 23 of B. A. I. Order 196. Each batch of the products named shall be held under bureau lock until the prescribed treatment or test has shown that the virus or serum is not worthless, contaminated, dangerous, or harmful. If the treatment or test is properly carried out and the virus or serum in question is proved to be of the proper purity and potency, the batch of virus or serum may be released to the company for sale, but the test sample should be retained under bureau lock in the room, compartment, or receptacle described in amendment 1 to regulation 23 of B. A. I. Order 196.

TEST FOR PURITY AND POTENCY OF ANTI-HOG-CHOLERA SERUM.

When anti-hog-cholera serum has been prepared and mixed in accordance with outstanding bureau orders and requirements, each batch shall be tested by licensed establishments for purity and potency in the following described manner:

1. For use in testing each batch of 80,000 c. c. of anti-hog-cholera serum or less, eight healthy pigs susceptible to hog cholera, and weighing not less than 40 pounds and not more than 90 pounds each, shall be furnished by the establishment.

2. Each of the eight pigs furnished for the test shall be injected with 2 c. c. of hog-cholera virus; of these pigs two shall receive 15 c. c. of the serum to be tested, two 20 c. c. and two 25 c. c. of the same serum. Two of the pigs shall receive no serum and shall serve as controls. All injections shall be made simultaneously, the virus being injected into the left and the serum into the right axillary space. The same virus shall be used for the inoculation of all pigs in the test, and shall be administered by a bureau employee.

3. A bureau employee shall indicate the pigs that shall receive the respective doses of serum with virus and those which shall receive the virus only, in each serum test.

4. Pigs which are injected with serum in serum tests shall be held under the observation of a bureau employee for a period of 21 days or longer in the discretion of the inspector in charge.

5. Pigs in serum tests, which receive virus only, shall be held under the observation of a bureau employee, and shall not be killed unless and until released by a bureau employee, who shall be satisfied that the pigs are visibly sick of hog cholera as hereinafter described in Rule D.

The following principle and rules are declared for a guide in judging the results of serum tests:

Principle.—It is practically impossible in many cases to differentiate between hog cholera, pneumonia, and other conditions affecting hogs, without the aid of an autopsy, as well as applied laboratory technique and certain experiments which may be necessary to determine the causative agent responsible for the condition. Therefore when healthy pigs are selected for testing anti-hog-cholera serum any abnormal condition which may arise in the pigs subsequent to their inoculation should be regarded as due either to the virus used or, in the case of the serum-treated pigs, to the fact that the serum does not protect unless the condition is definitely known or can be shown to be due to some other cause.

Rule A.—A serum test shall be declared "no test" if any one of the following conditions obtain:

1. When any of the serum-treated test pigs or both of the control pigs become visibly sick on or before the fourth day after the time of inoculation.

2. When one or both of the control pigs do not become visibly sick of hog cholera within seven days after the time of inoculation.

3. When one or both of the control pigs become visibly sick of hog cholera within seven days, but do not become visibly sick to a degree sufficient to result in death within 15 days after the time of inoculation.

4. When any of the serum-treated test pigs develop during the test period symptoms of any infectious, contagious, or communicable disease other than hog cholera which appears not to have been caused by the serum used.

Rule B.—A serum test shall be declared "unsatisfactory and the serum contaminated" when the following conditions obtain:

1. When any of the serum-treated test pigs develop during the test period symptoms of any infectious, contagious, or communicable disease other than hog cholera which is known to be due to the serum used.

Rule C.—A serum test shall be declared "unsatisfactory" when either one of the following conditions obtains:

1. When any one of the test pigs injected with serum, except those pigs which receive 15 c. c. each, become visibly sick after the fourth day of the test period and at least one of the control pigs react as described in Rule D.

2. When an abscess which is not definitely known to be due to a cause other than the serum used develops at the point of the serum inoculation in any of the serum-treated pigs.

Rule D.—A serum test shall be declared "satisfactory" when the following conditions obtain:

1. When one or both of the control pigs become visibly sick of hog cholera subsequent to the fourth day of the test period but within 7 days after the test is inaugurated, and visibly sick to a degree sufficient to result in death within 15 days after the time of inoculation, while all of the serum-treated pigs remain well throughout the test.

Rule E.—A serum test shall be declared "satisfactory under increased dose" when the following conditions obtain:

1. When one or both of the control pigs react as described in Rule D and one or both of the 15 c. c. serum-treated pigs become visibly sick within the test period subsequent to the fourth day after the time of inoculation, and all other serum-treated pigs remain well throughout the test.

Anti-hog-cholera serum which upon test is found "satisfactory under increased dose" as defined in Rule E, may be tested again by observing the following provisions:

1. If the second test is found "satisfactory" as defined in Rule D the serum may be released for marketing as provided below.

2. Should the second test be found "satisfactory under increased dose" as defined in Rule E the serum may be either marketed as provided below or mixed with other serum and tested as hereinbefore prescribed.

3. In the event the second test is found "unsatisfactory" as defined in paragraph 1 of Rule C the serum shall not be marketed unless mixed with other serum and tested as above prescribed.

Anti-hog-cholera serum which upon test is found "unsatisfactory" as defined in paragraph 1 of Rule C, and upon a second test is found "satisfactory under increased dose," as defined in Rule E, shall be recommended for use in doses prescribed below or mixed with other serum and tested as hereinbefore provided.

Anti-hog-cholera serum may be released for marketing as hereinafter prescribed, provided the test required in this order is found to be "satisfactory," as defined in Rule D, or if found to be "satisfactory under increased dose," as defined in Rule E.

Anti-hog-cholera serum which upon test is found to be "satisfactory" shall be recommended for use in a dose of not less than 20 c. c. for hogs weighing 100 pounds or less. Anti-hog-cholera serum which upon test is found to be "satisfactory under increased dose" shall be recommended for use in doses of not less than 30 c. c. for all hogs to which the serum may be administered and the individual weight of which is 100 pounds or less.

Anti-hog-cholera serum, the test of which has proved it to be "unsatisfactory," as defined in Rule C of this order, may be tested again, if the licensed establishment so desires, in the manner hereinbefore prescribed. If the second test proves to be "satisfactory," as defined in Rule D, the serum may be released for marketing. If the test is again found "unsatisfactory" for the same reason, the serum shall not be marketed except as hereinafter provided.

Anti-hog-cholera serum which has been found "unsatisfactory" upon two different tests, as defined in paragraph 1 of Rule C, may be mixed with other serum and tested as before if the establishment so desires, provided the final mixture consists of not less than 50 per cent nor more than 60 per cent of the serum of low potency. This mixture should be given a new serial number, and proper entry should be made in all records to show the serial number or source and the quantity of each part composing the batch. Should the mixture upon test be found "satisfactory," as defined in Rule D, or "satisfactory under increased dose," as defined in Rule E, it may be marketed, provided it is recommended for use in doses hereinafter indicated. Anti-hog-cholera serum which has been so mixed and found "unsatisfactory" upon two different tests shall not be marketed.

RECORDS OF SHIPMENTS.

Licensed establishments are required to maintain a complete record of all shipments of serum or other products. The records should show the date of shipment, the consignee, the quantity of each product shipped, and the serial number of the product; furthermore, when establishments maintain distributing depots a list of these depots should be maintained at the parent establishment, and all shipments to these depots should be recorded in the manner described above. In addition it should be required by the establishments that each distributing depot maintain a record of shipments from the distributing depot to other points, the record to contain the data indicated above.

AMENDMENT TO ADMINISTRATIVE REGULATIONS.

By memorandum No. 210, dated June 20, 1917, the Secretary of Agriculture has amended paragraph 7 of the administrative regulations so as to read as follows:

7. *Titles and salaries of lump-fund employees.*—In making recommendations for appointments, promotions, or other changes in the force of scientific, technical, and other employees of the Department paid from lump-fund appropriations, the chief of each bureau, division, or office should, so far as practicable, limit the number and variety of titles, and the proposed rate of salary should be selected from the annual salary tables in the fiscal regulations, and be one which, when divided by 12, will give a convenient quotient of even dollars.

AMENDMENTS TO FISCAL REGULATIONS.

By memorandum No. 207, dated June 9, 1917, the Secretary of Agriculture has amended paragraphs 45, 75, and 78 (*h*) of the fiscal regulations to read as follows:

Paragraph 45. All telegraph messages relating to the business of the department should be indorsed "U. S. official business, Government rate." Messages sent from or to Washington, D. C., must not be paid for by the persons sending or receiving the same, except where payment is demanded as a condition to the transmission or delivery of the message. Telegrams not prepaid should have the additional words "Charge Department of Agriculture, Bureau of ———," written or stamped upon the face thereof, and the agent, operator, or messenger should be directed to have the same included in the company's monthly bill. Telegraph messages between points in the field should be prepaid at the Government rate by the employees, where payment is demanded as a condition to the transmission or delivery, and a copy of each prepaid message should support the claim for reimbursement. Identification cards for presentation to agents may be obtained upon application, through the chief of bureau, to the chief clerk of the department. These identification cards must not be used for telegrams reserving hotel or Pullman accommodations by employees receiving per diem allowances while traveling, as such telegrams are not official.

Paragraph 75. Employees authorized to receive per diem allowances will not be reimbursed, in addition, for meals, lodgings, fees to hotel employees, waiter fees, fees to dining-room stewards on steamships, bath, laundry, telegrams, reserving hotel or Pullman accommodations, or other subsistence expenses; but, in addition to the per diem allowance, may be reimbursed for expenses actually and necessarily incurred for railroad and steamboat fares, including fees to cabin and deck stewards, sleeping berth, stateroom on steamboats, seats in parlor or chair cars, street car, transfer coach and omnibus fares, transfer of baggage, livery hire, stage fare, and other means of conveyance between points not accessible by railroad, fees for checking baggage at depots and docks, fees to Pullman, depot, and dock porters, and other expenses of transportation: *Provided*, That reimbursement for the payment of any fee herein mentioned will not be allowed in any State in which payment of such fee is prohibited by law. (See Appendix G.)

Paragraph 78 (*h*). Except as provided in paragraph 78 (*v*), customary charges for subsistence expenses, not to exceed in the aggregate $5 for any one day, may be allowed and will include all expenses incurred for meals, lodging, bath, personal use of room at hotel during the daytime, waiter fees not exceeding 30 cents in any one day, fees for checking and porterage of baggage upon arrival at and departure from hotels not to exceed 10 cents for porterage of, and 10 cents for checking, each piece, telegrams reserving hotel accommodations (but not telegrams reserving Pullman accommodations), laundry not exceeding 20 cents a day, to be included in subsistence expenses for the date on which it is paid, and all other subsistence expenses. Charges for laundry must include all expenses incurred for that item during the period for which the voucher is rendered and must not include laundry items brought forward from previous periods. Charges incurred for laundy at official headquarters at the termination of a trip will not be allowed. Receipts for laundry must be submitted or a written statement filed with the account showing the impracticability of obtaining such receipts. A charge for lodging at a hotel and a charge for sleeper berth for the same night will be allowed only when accompanied by a definite statement of necessity: *Provided*, That reimbursement for the payment of any fee herein mentioned will not be allowed in States in which the payment of such fee is prohibited by law. (See Appendix G.)

By memorandum No. 209, dated June 16, 1917, the Secretary of Agriculture has amended Appendix G of the Fiscal Regulations to read as follows:

Payment of tips, fees, or gratuities to any steward, waiter, porter, or other employee at any hotel, restaurant, café, eating house, or to any porter or other employee of any sleeping-car company, corporation, or carrier is prohibited by law in the States of Arkansas and Iowa.

Payment of tips, fees, or gratuities to any person in the employ of any hotel, restaurant, café, dining car, railroad company, or sleeping-car company is prohibited by law in the States of South Carolina, Mississippi, and Tennessee.

Payment of sleeping-car or parlor-car porters' tips while en route to a point in all antitipping States will not be allowed.

VIOLATIONS OF LAWS.

Fines and penalties were imposed in prosecutions for violations of regulatory laws, as reported to the bureau during the month of June, 1917, as follows:

TWENTY-EIGHT-HOUR LAW.

Cleveland, Cincinnati, Chicago & St. Louis Railway Co. (28 cases), $2,800 and $13.80 costs.

Toledo, St. Louis & Western Railroad Co., $100 and $16.69 costs.

Chicago Great Western Railroad Co., $100 and $20.14 costs.

Yazoo & Mississippi Valley Railroad Co., $100 and $20.40 costs.

Chicago, St. Paul, Minneapolis & Omaha Railway Co., $100 and costs.

Chicago, Milwaukee & St. Paul Railway Co. (9 cases), $900 and costs.

Wabash Railway Co., $100 and $24.86 costs.

Spokane, Portland & Seattle Railway Co., $100 and $19.55 costs.

Baltimore & Ohio Railroad Co. (6 cases), $875 and $65 costs.

New York Central & Hudson River Railroad Co. (4 cases), $400 and $99.60 costs.

Boston & Maine Railroad Co., $100.

Colorado & Southern Railway Co., $500.

Grand Trunk Western Railway Co., $100.

Delaware & Hudson Railroad Co. (2 cases), $200 and $50.12 costs.

Chicago, Burlington & Quincy Railroad Co. (2 cases), $200 and $13.55 costs.

St. Louis Merchants' Bridge Terminal Railway Co. (14 cases), $1,400 and $46.39 costs.

Atchison, Topeka & Santa Fe Railway Co., $100 and $14.15 costs.

Lehigh Valley Railroad Co. (5 cases), $500 and $16.50 costs.

Missouri, Kansas & Texas Railway Co. (3 cases), $300 and costs.

Terminal Association of St. Louis, $100 and costs.

Illinois Central Railroad Co. (5 cases), $500 and costs.

Denver & Rio Grande Railroad Co., $100 and $17 costs.

Missouri Pacific Railway Co., $100 and $13.75 costs.

Grand Trunk Western Railway Co., $300, additional to the $200 and costs reported in March, 1917.

QUARANTINE LAWS.

Chicago and North Western Railway Co., interstate shipment in violation of regulations regarding shipment of dead animals, $100 and costs.

Chicago, Milwaukee & St. Paul Railway Co. (3 cases), interstate shipment in violations of regulations regarding shipment of dead animals, $300 and costs.

Kansas City Southern Railway Co., interstate shipment in violation of regulations regarding shipment of dead animals, $100 and $17.30 costs.

Receiver of St. Louis, Iron Mountain & Southern Railway Co., interstate shipment in violation of Texas fever regulations, $100 and $11.05 costs.

Atchison, Topeka & Santa Fe Railroad Co. (6 cases), interstate shipment in violation of Texas fever regulations, $800 and $116.12 costs.

Sam Sirlin, interstate shipment in violation of tuberculosis regulations, $100.

PUBLICATIONS IN JUNE.

[The bureau keeps no mailing list for sending publications to individual employees, but publications are sent in bulk to inspectors in charge for distribution to members of their forces. The number of copies varies with the subject or nature of the publication and the number and class of employees. For example, in the case of a publication on a veterinary subject, sufficient copies are sent for the veterinarians. Inspectors in charge will use their judgment and distribute publications to best advantage. Additional copies will be furnished on request so far as possible.]

Department Bulletin 563. The Determination of Bacteria in Ice Cream. By S. Henry Ayers and W. T. Johnson, jr., Dairy Division. Pp. 16.

Farmers' Bulletin 798. The Sheep Tick and Its Eradication by Dipping. By Marion Imes, Zoological Division. Pp. 31, figs. 15.

Farmers' Bulletin 803. Horse-Breeding Suggestions for Farmers. By H. H. Reese, Animal Husbandry Division. Pp. 22, figs. 10.

Farmers' Bulletin 810. Equipment for Farm Sheep Raising. By V. O. McWhorter, Animal Husbandry Division. Pp. 28, figs. 37.

Farmers' Bulletin 822. Live-Stock Classifications at County Fairs. By S. H. Ray, Animal Husbandry Division. Pp. 12.

Amendment 2 to B. A. I. Order 251. To Prevent the Spread of Splenetic, Southern, or Texas Fever in Cattle. (Quarantines the entire territory of Porto Rico.)

A Tick-Free South. (Illustrated leaflet.) Pp. 16.

Simple Directions for Making Cottage Cheese on the Farm. (A. I. 17.) Pp. 3.

Ways to Use Cottage Cheese. (A. I. 18.) Pp. 2.

The Manufacture of Cottage Cheese in Creameries and Milk Plants. (A. I. 19.) Pp. 4.

The Food Value of American Cheese. (A. I. 21.) Pp. 2.

Buttermilk a Food Drink. (A. I. 22.) Pp. 2.

Cottage Cheese—An Inexpensive Meat Substitute. P. 1.

Milk as a Food. P. 1.

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Office of Virus-Serum Control: H. J. Shore in charge.
Office of Accounts: E. J. Newmeyer in charge.
Appointment Section: Irving W. Pew in charge.

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